



# SEQUENCE LISTING

<110> DANIELA PHAM, NAM

<120> RAS ACTIVATOR NUCLEIC ACID MOLECULES, POLYPEPTIDES AND METHODS OF USE

<130> DWW-5001-US

<140> 09/911,826

<141> 2001-07-20

<150> PCT/CA00/00042

<151> 2000-01-20

<150> CA 2,259,830

<151> 1999-01-20

<160> 28

<170> PatentIn Ver. 3.2

<210> 1

<211> 6568

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (63)..(4559)

<220>

<221> CDS

<222> (4563)..(4622)

<220>

<221> CDS

<222> (4626)..(4679)

<400> 1

cttgccatcg tgagagattg gtacatgatg tgtaaattca gttcagcata tgtttcttca	60
tt atg aaa cca cta gca atc cca gct aac cat gga gtt atg ggc cag	107
Met Lys Pro Leu Ala Ile Pro Ala Asn His Gly Val Met Gly Gln	
1 5 10 15	
cag gag aaa cac tca ctt cct gca gat ttc aca aaa ctg cat ctt act	155
Gln Glu Lys His Ser Leu Pro Ala Asp Phe Thr Lys Leu His Leu Thr	
20 25 30	
gac agt ctc cac cca cag gtg acc cac gtt tct tct agc cat tca gga	203
Asp Ser Leu His Pro Gln Val Thr His Val Ser Ser Ser His Ser Gly	
35 40 45	
tgt agt atc act agt gat tct ggg agc agc agt ctt tct gat atc tac	251
Cys Ser Ile Thr Ser Asp Ser Gly Ser Ser Ser Leu Ser Asp Ile Tyr	

50	55	60	
cag gcc aca gaa agc gag gct ggt gat atg gac ctg agt ggg ttg cca Gln Ala Thr Glu Ser Glu Ala Gly Asp Met Asp Leu Ser Gly Leu Pro 65 70 75			299
gaa aca gca gtg gat tcc gaa gac gac gac gat gaa gaa gac att gag Glu Thr Ala Val Asp Ser Glu Asp Asp Asp Asp Glu Glu Asp Ile Glu 80 85 90 95			347
aga gca tca gat cct ctg atg agc agg gac att gtg aga gac tgc cta Arg Ala Ser Asp Pro Leu Met Ser Arg Asp Ile Val Arg Asp Cys Leu 100 105 110			395
gag aag gac cca att gac cgg aca gat gat gac att gaa caa ctc ttg Glu Lys Asp Pro Ile Asp Arg Thr Asp Asp Asp Ile Glu Gln Leu Leu 115 120 125			443
gaa ttt atg cac cag ttg cct gct ttt gcc aat atg aca atg tca gtg Glu Phe Met His Gln Leu Pro Ala Phe Ala Asn Met Thr Met Ser Val 130 135 140			491
agg cga gaa ctc tgt gct gtg atg gtg ttc gca gtg gtg gaa aga gca Arg Arg Glu Leu Cys Ala Val Met Val Phe Ala Val Val Glu Arg Ala 145 150 155			539
ggg acc ata gtg tta aat gat ggt gaa gag ctg gac tcc tgg tca gtg Gly Thr Ile Val Leu Asn Asp Gly Glu Glu Leu Asp Ser Trp Ser Val 160 165 170 175			587
att ctc aat gga tct gtg gaa gtg act tat cca gat gga aaa gca gaa Ile Leu Asn Gly Ser Val Glu Val Thr Tyr Pro Asp Gly Lys Ala Glu 180 185 190			635
ata ctg tgc atg gga aat agt ttt ggt gtc tct cct acc atg gac aaa Ile Leu Cys Met Gly Asn Ser Phe Gly Val Ser Pro Thr Met Asp Lys 195 200 205			683
gaa tac atg aaa gga gtg atg aga aca aag gtg gat gac tgc cag ttt Glu Tyr Met Lys Gly Val Met Arg Thr Lys Val Asp Asp Cys Gln Phe 210 215 220			731
gtc tgc ata gcc cag caa gat tac tgc cgt att ctc aat caa gta gaa Val Cys Ile Ala Gln Gln Asp Tyr Cys Arg Ile Leu Asn Gln Val Glu 225 230 235			779
aag aac atg caa aaa gtt gaa gag gaa gga gag att gtt atg gtg aaa Lys Asn Met Gln Lys Val Glu Glu Glu Gly Glu Ile Val Met Val Lys 240 245 250 255			827
gaa cac cga gaa ctt gat cga act gga aca aga aag gga cac att gtc Glu His Arg Glu Leu Asp Arg Thr Gly Thr Arg Lys Gly His Ile Val 260 265 270			875
atc aag ggt acc tca gaa agg tta aca atg cat ttg gtg gaa gag cat Ile Lys Gly Thr Ser Glu Arg Leu Thr Met His Leu Val Glu Glu His 275 280 285			923

tca gta gta gat cca aca ttc ata gaa gac ttt ctg ttg acc tat agg	971
Ser Val Val Asp Pro Thr Phe Ile Glu Asp Phe Leu Leu Thr Tyr Arg	
290 295 300	
act ttt ctt tct agc cca atg gaa gtg ggc aaa aag tta ttg gag tgg	1019
Thr Phe Leu Ser Ser Pro Met Glu Val Gly Lys Lys Leu Leu Glu Trp	
305 310 315	
ttt aat gac ccg agc ctc agg gat aag gtt aca cgg gta gta tta ttg	1067
Phe Asn Asp Pro Ser Leu Arg Asp Lys Val Thr Arg Val Val Leu Leu	
320 325 330 335	
tgg gta aat aat cac ttc aat gac ttt gaa gga gat cct gca atg act	1115
Trp Val Asn Asn His Phe Asn Asp Phe Glu Gly Asp Pro Ala Met Thr	
340 345 350	
cga ttt tta gaa gaa ttt gaa aac aat ctg gaa aga gag aaa atg ggt	1163
Arg Phe Leu Glu Glu Phe Glu Asn Asn Leu Glu Arg Glu Lys Met Gly	
355 360 365	
gga cac cta agg ctg ttg aat atc gcg tgt gct gct aaa gca aaa aga	1211
Gly His Leu Arg Leu Leu Asn Ile Ala Cys Ala Ala Lys Ala Lys Arg	
370 375 380	
aga ttg atg acg tta aca aaa cca tcc cga gaa gct cct ttg cct ttt	1259
Arg Leu Met Thr Leu Thr Lys Pro Ser Arg Glu Ala Pro Leu Pro Phe	
385 390 395	
atc tta ctt gga ggc tct gag aag gga ttt gga atc ttt gtt gac agt	1307
Ile Leu Leu Gly Gly Ser Glu Lys Gly Phe Gly Ile Phe Val Asp Ser	
400 405 410 415	
gta gat tca ggt agc aaa gca act gaa gca ggc ttg aaa cgg ggg gat	1355
Val Asp Ser Gly Ser Lys Ala Thr Glu Ala Gly Leu Lys Arg Gly Asp	
420 425 430	
cag ata tta gaa gta aat ggc caa aac ttt gaa aac att cag ctg tca	1403
Gln Ile Leu Glu Val Asn Gly Gln Asn Phe Glu Asn Ile Gln Leu Ser	
435 440 445	
aaa gct atg gaa att ctt aga aat aac aca cat tta tct atc act gtg	1451
Lys Ala Met Glu Ile Leu Arg Asn Asn Thr His Leu Ser Ile Thr Val	
450 455 460	
aaa acc aat tta ttt gta ttt aaa gaa ctt cta aca aga ttg tca gaa	1499
Lys Thr Asn Leu Phe Val Phe Lys Glu Leu Leu Thr Arg Leu Ser Glu	
465 470 475	
gag aaa aga aat ggt gcc ccc cac ctt cct aaa att ggt gac att aaa	1547
Glu Lys Arg Asn Gly Ala Pro His Leu Pro Lys Ile Gly Asp Ile Lys	
480 485 490 495	
aag gcc agt cgc tac tcc att cca gat ctt gct gta gat gta gaa cag	1595
Lys Ala Ser Arg Tyr Ser Ile Pro Asp Leu Ala Val Asp Val Glu Gln	
500 505 510	

gtg ata gga ctt gaa aaa gtg aac aaa aaa agt aaa gcc aac act gtg Val Ile Gly Leu Glu Lys Val Asn Lys Lys Ser Lys Ala Asn Thr Val 515 520 525	1643
gga gga agg aac aag ctg aaa aag ata ctc gac aag act cgg atc agt Gly Gly Arg Asn Lys Leu Lys Lys Ile Leu Asp Lys Thr Arg Ile Ser 530 535 540	1691
atc ttg cca cag aaa cca tac aat gat att ggg att ggt cag tct caa Ile Leu Pro Gln Lys Pro Tyr Asn Asp Ile Gly Ile Gly Gln Ser Gln 545 550 555	1739
gat gac agc ata gta gga tta agg cag aca aag cac atc cca act gca Asp Asp Ser Ile Val Gly Leu Arg Gln Thr Lys His Ile Pro Thr Ala 560 565 570 575	1787
ttg cct gtc agt gga acc tta tca tcc agt aat cct gat tta ttg cag Leu Pro Val Ser Gly Thr Leu Ser Ser Ser Asn Pro Asp Leu Leu Gln 580 585 590	1835
tca cat cat cgc att tta gac ttc agt gct act cct gac ttg cca gat Ser His His Arg Ile Leu Asp Phe Ser Ala Thr Pro Asp Leu Pro Asp 595 600 605	1883
caa gtg cta agg gtt ttt aag gct gat cag caa agc cgc tac atc atg Gln Val Leu Arg Val Phe Lys Ala Asp Gln Gln Ser Arg Tyr Ile Met 610 615 620	1931
atc agt aag gac act aca gca aag gaa gtg gtc att cag gct atc agg Ile Ser Lys Asp Thr Thr Ala Lys Glu Val Val Ile Gln Ala Ile Arg 625 630 635	1979
gag ttt gct gtt act gcc acc ccg gat caa tat tca cta tgt gag gtc Glu Phe Ala Val Thr Ala Thr Pro Asp Gln Tyr Ser Leu Cys Glu Val 640 645 650 655	2027
tct gtc aca cct gag gga gta atc aaa caa aga aga ctt cca gat cag Ser Val Thr Pro Glu Gly Val Ile Lys Gln Arg Arg Leu Pro Asp Gln 660 665 670	2075
ctt tcc aaa ctt gca gac aga ata caa ctg agt gga agg tat tat ctg Leu Ser Lys Leu Ala Asp Arg Ile Gln Leu Ser Gly Arg Tyr Tyr Leu 675 680 685	2123
aaa aac aac atg gaa aca gaa act ctt tgt tca gat gaa gat gct cag Lys Asn Asn Met Glu Thr Glu Thr Leu Cys Ser Asp Glu Asp Ala Gln 690 695 700	2171
gag ttg ttg aga gag agt caa att tcc ctc ctt cag ctc agc act gtg Glu Leu Leu Arg Glu Ser Gln Ile Ser Leu Leu Gln Leu Ser Thr Val 705 710 715	2219
gaa gtt gca aca cag ctc tct atg cga aat ttt gaa ctc ttt cgc aac Glu Val Ala Thr Gln Leu Ser Met Arg Asn Phe Glu Leu Phe Arg Asn 720 725 730 735	2267
att gaa cct act gaa tat ata gat gat tta ttt aaa ctc aga tca aaa	2315

Ile Glu Pro Thr Glu Tyr Ile Asp Asp Leu Phe Lys Leu Arg Ser Lys	
740 745 750	
acc agc tgt gcc aac ctg aag aga ttt gaa gaa gtc att aac cag gaa	2363
Thr Ser Cys Ala Asn Leu Lys Arg Phe Glu Glu Val Ile Asn Gln Glu	
755 760 765	
aca ttt tgg gta gca tct gaa att ctc aga gaa aca aac cag ctg aag	2411
Thr Phe Trp Val Ala Ser Glu Ile Leu Arg Glu Thr Asn Gln Leu Lys	
770 775 780	
agg atg aag atc att aag cat ttc atc aag ata gca ctg cac tgt agg	2459
Arg Met Lys Ile Ile Lys His Phe Ile Lys Ile Ala Leu His Cys Arg	
785 790 795	
gaa tgc aag aat ttt aac tca atg ttt gca atc atc agt ggc cta aac	2507
Glu Cys Lys Asn Phe Asn Ser Met Phe Ala Ile Ile Ser Gly Leu Asn	
800 805 810 815	
ctg gca cca gtg gca aga ctg cga acg acc tgg gag aaa ctt ccc aat	2555
Leu Ala Pro Val Ala Arg Leu Arg Thr Thr Trp Glu Lys Leu Pro Asn	
820 825 830	
aaa tac gaa aaa cta ttt caa gat ctc caa gac ctg ttt gat cct tcc	2603
Lys Tyr Glu Lys Leu Phe Gln Asp Leu Gln Asp Leu Phe Asp Pro Ser	
835 840 845	
aga aac atg gca aaa tat cgt aat gtt ctc aat agt caa aat cta caa	2651
Arg Asn Met Ala Lys Tyr Arg Asn Val Leu Asn Ser Gln Asn Leu Gln	
850 855 860	
cct ccc ata atc cct cta ttc cca gtt atc aaa aag gat ctc acc ttc	2699
Pro Pro Ile Ile Pro Leu Phe Pro Val Ile Lys Lys Asp Leu Thr Phe	
865 870 875	
ctt cac gaa gga aat gac tca aaa gta gac ggg ctg gtc aat ttt gag	2747
Leu His Glu Gly Asn Asp Ser Lys Val Asp Gly Leu Val Asn Phe Glu	
880 885 890 895	
aag cta agg atg att gca aaa gaa att cgt cac gtt ggc cga atg gct	2795
Lys Leu Arg Met Ile Ala Lys Glu Ile Arg His Val Gly Arg Met Ala	
900 905 910	
tca gtg aac atg gac cct gcc ctc atg ttc agg act cgg aag aag aaa	2843
Ser Val Asn Met Asp Pro Ala Leu Met Phe Arg Thr Arg Lys Lys Lys	
915 920 925	
tgg cgg agt ttg ggg tct ctc agc cag ggt agt aca aat gca aca gtg	2891
Trp Arg Ser Leu Gly Ser Leu Ser Gln Gly Ser Thr Asn Ala Thr Val	
930 935 940	
cta gat gtt gct cag aca ggt ggt cat aaa aag cgg gta cgt cgt agt	2939
Leu Asp Val Ala Gln Thr Gly Gly His Lys Lys Arg Val Arg Arg Ser	
945 950 955	
tcc ttt ctc aat gcc aaa aag ctt tat gaa gat gcc caa atg gct cga	2987
Ser Phe Leu Asn Ala Lys Lys Leu Tyr Glu Asp Ala Gln Met Ala Arg	

960	965	970	975	
aaa gtg aag cag tac ctt tcc aat ttg gag cta gaa atg gac gag gag				3035
Lys Val Lys Gln Tyr Leu Ser Asn Leu Glu Leu Glu Met Asp Glu Glu	980	985	990	
agt ctt cag aca tta tct ctg cag tgt gag cca gca acc aac aca ttg				3083
Ser Leu Gln Thr Leu Ser Leu Gln Cys Glu Pro Ala Thr Asn Thr Leu	995	1000	1005	
cct aag aat cct ggt gac aaa aag cct gtc aaa tcc gag acc tct				3128
Pro Lys Asn Pro Gly Asp Lys Lys Pro Val Lys Ser Glu Thr Ser	1010	1015	1020	
cca gta gct cca agg gca ggg tca caa cag aaa gct cag tcc ctg				3173
Pro Val Ala Pro Arg Ala Gly Ser Gln Gln Lys Ala Gln Ser Leu	1025	1030	1035	
cca cag ccc cag cag cag cca cca cca gca cat aaa atc aac cag				3218
Pro Gln Pro Gln Gln Gln Pro Pro Pro Ala His Lys Ile Asn Gln	1040	1045	1050	
gga cta cag gtt ccc gcc gtg tcc ctt tat cct tca cgg aag aaa				3263
Gly Leu Gln Val Pro Ala Val Ser Leu Tyr Pro Ser Arg Lys Lys	1055	1060	1065	
gtg ccc gta aag gat ctc cca cct ttt ggc ata aac tct cca caa				3308
Val Pro Val Lys Asp Leu Pro Pro Phe Gly Ile Asn Ser Pro Gln	1070	1075	1080	
gct tta aaa aaa att ctt tct ttg tct gaa gaa gga agt ttg gaa				3353
Ala Leu Lys Lys Ile Leu Ser Leu Ser Glu Glu Gly Ser Leu Glu	1085	1090	1095	
cgt cac aag aaa cag gct gaa gat aca ata tca aat gca tct tcg				3398
Arg His Lys Lys Gln Ala Glu Asp Thr Ile Ser Asn Ala Ser Ser	1100	1105	1110	
cag ctt tct tct cct cct act tct cca cag agt tct cca agg aaa				3443
Gln Leu Ser Ser Pro Pro Thr Ser Pro Gln Ser Ser Pro Arg Lys	1115	1120	1125	
ggc tat act ttg gct ccc agt ggt act gtg gat aat ttt tca gat				3488
Gly Tyr Thr Leu Ala Pro Ser Gly Thr Val Asp Asn Phe Ser Asp	1130	1135	1140	
tct ggt cac agt gaa att tct tca cga tcc agt att gtt agc aat				3533
Ser Gly His Ser Glu Ile Ser Ser Arg Ser Ser Ile Val Ser Asn	1145	1150	1155	
tcg tct ttt gac tca gtg cca gtc tca ctg cac gat gag agg cgc				3578
Ser Ser Phe Asp Ser Val Pro Val Ser Leu His Asp Glu Arg Arg	1160	1165	1170	
cag agg cat tct gtc agc atc gtg gaa aca aac cta ggg atg ggc				3623
Gln Arg His Ser Val Ser Ile Val Glu Thr Asn Leu Gly Met Gly	1175	1180	1185	

agg atg gag	agg cgg acc atg att	gaa cct gat cag tat	agc ttg	3668
Arg Met Glu	Arg Arg Thr Met Ile	Glu Pro Asp Gln Tyr	Ser Leu	
1190	1195	1200		
ggg tcc tat	gca cca atg tcc gag	ggc cga ggc tta tat	gct aca	3713
Gly Ser Tyr	Ala Pro Met Ser Glu	Gly Arg Gly Leu Tyr	Ala Thr	
1205	1210	1215		
gct aca gta	att tct tct cca agc	aca gag gaa ctt tcc	cag gat	3758
Ala Thr Val	Ile Ser Ser Pro Ser	Thr Glu Glu Leu Ser	Gln Asp	
1220	1225	1230		
cag ggg gat	cgc gcg tca ctt gat	gct gct gac agt ggc	cgt ggg	3803
Gln Gly Asp	Arg Ala Ser Leu Asp	Ala Ala Asp Ser Gly	Arg Gly	
1235	1240	1245		
agc tgg acg	tca tgc tca agt ggc	tcc cat gat aat ata	cag acg	3848
Ser Trp Thr	Ser Cys Ser Ser Gly	Ser His Asp Asn Ile	Gln Thr	
1250	1255	1260		
atc cag cac	cag aga agc tgg gag	act ctt cca ttc ggg	cat act	3893
Ile Gln His	Gln Arg Ser Trp Glu	Thr Leu Pro Phe Gly	His Thr	
1265	1270	1275		
cac ttt gat	tat tca ggg gat cct	gca ggt tta tgg gca	tca agc	3938
His Phe Asp	Tyr Ser Gly Asp Pro	Ala Gly Leu Trp Ala	Ser Ser	
1280	1285	1290		
agc cat atg	gac caa att atg ttt	tct gat cat agc aca	aag tat	3983
Ser His Met	Asp Gln Ile Met Phe	Ser Asp His Ser Thr	Lys Tyr	
1295	1300	1305		
aac agg caa	aat caa agt aga gag	agc ctt gaa caa gcc	cag tcc	4028
Asn Arg Gln	Asn Gln Ser Arg Glu	Ser Leu Glu Gln Ala	Gln Ser	
1310	1315	1320		
cga gca agc	tgg gcg tct tcc aca	ggg tac tgg gga gaa	gac tca	4073
Arg Ala Ser	Trp Ala Ser Ser Thr	Gly Tyr Trp Gly Glu	Asp Ser	
1325	1330	1335		
gaa ggt gac	aca ggc aca ata aag	cgg agg ggt gga aag	gat gtt	4118
Glu Gly Asp	Thr Gly Thr Ile Lys	Arg Arg Gly Gly Lys	Asp Val	
1340	1345	1350		
tcc att gaa	gcc gaa agc agt agc	cta acg tct gtg act	acg gaa	4163
Ser Ile Glu	Ala Glu Ser Ser Ser	Leu Thr Ser Val Thr	Thr Glu	
1355	1360	1365		
gaa acc aag	cct gtc ccc atg cct	gcc cac ata gct gtg	gca tca	4208
Glu Thr Lys	Pro Val Pro Met Pro	Ala His Ile Ala Val	Ala Ser	
1370	1375	1380		
agt act aca	aag ggg ctc att gca	cga aag gag ggc agg	tat cga	4253
Ser Thr Thr	Lys Gly Leu Ile Ala	Arg Lys Glu Gly Arg	Tyr Arg	
1385	1390	1395		

gag ccc ccg ccc acc cct ccc ggc tac att gga att ccc att act	4298
Glu Pro Pro Pro Thr Pro Pro Gly Tyr Ile Gly Ile Pro Ile Thr	
1400 1405 1410	
gac ttt cca gaa ggg cac tcc cat cca gcc agg aaa ccg ccg gac	4343
Asp Phe Pro Glu Gly His Ser His Pro Ala Arg Lys Pro Pro Asp	
1415 1420 1425	
tac aac gtg gcc ctt cag aga tcg cgg atg gtc gca cga tcc tcc	4388
Tyr Asn Val Ala Leu Gln Arg Ser Arg Met Val Ala Arg Ser Ser	
1430 1435 1440	
gac aca gct ggg cct tca tcc gta cag cag cca cat ggg cat ccc	4433
Asp Thr Ala Gly Pro Ser Ser Val Gln Gln Pro His Gly His Pro	
1445 1450 1455	
acc agc agc agg cct gtg aac aaa cct cag tgg cat aaa ccg aac	4478
Thr Ser Ser Arg Pro Val Asn Lys Pro Gln Trp His Lys Pro Asn	
1460 1465 1470	
gag tct gac ccg cgc ctc gcc cct tat cag tcc caa ggg ttt tcc	4523
Glu Ser Asp Pro Arg Leu Ala Pro Tyr Gln Ser Gln Gly Phe Ser	
1475 1480 1485	
acc gag gag gat gaa gat gaa caa gtt tct gct gtt tga ggc aca	4568
Thr Glu Glu Asp Glu Asp Glu Gln Val Ser Ala Val Gly Thr	
1490 1495 1500	
gac ttt tct gga agc aga gcg agc cac ctg aaa gga gag cac aag	4613
Asp Phe Ser Gly Ser Arg Ala Ser His Leu Lys Gly Glu His Lys	
1505 1510 1515	
aag acg tcc tga gca ttg gag cct tgg aac tca cat tct gag gac	4658
Lys Thr Ser Ala Leu Glu Pro Trp Asn Ser His Ser Glu Asp	
1520 1525 1530	
ggt gga cca gtt tgc ctc ctt cctgcctta aaagcagcat ggggcttctt	4709
Gly Gly Pro Val Cys Leu Leu	
1535	
ctcccccttct tcctttcccc tttgcatgtg aaatactgtg aagaaattgc cctggcactt	4769
ttcagacttt gttgcttgaa atgcacagtg cagcaatctt cgagctccca ctgttgctgc	4829
ctgccacatc acacagtatc attccaaatt ccaagatcat cacaacaaga tgattcactc	4889
tggtctgcaact tctcaatgcc tggaaggatt ttttttaatc ttccttttag atttcaatcc	4949
agtcctagca cttgatctca ttgggataat gagaaaagct agccattgaa ctacttgggg	5009
cctttaaccc accaaggaag acaaagaaaa acaatgaaat cctttgagta cagtgcctgt	5069
ccacttgttt acaatgtcct ccttttaaaa aaaaaaatga gtttaaagat tttgttcaga	5129
gagtaaatat atatccatctt aatgattaca gtattatctt aaaccttaag tagggttgcc	5189
agcctggttt ctgaaaaacc aaatatgccg gacagggtgt ggccacacca agaagacggg	5249

aagacctggc ttgtgaccct ggcttcccat gtccttcttg tctcaccgc gaagtgcct	5309
atcctggaag tatgaaatgt tagccaatta ataccaagac acctcatctg ctcttcccc	5369
agtggatggg gttcttctgt aaaactgttt gcacatggcc aggggaggga actaggaccc	5429
ttgtgtcctg tctgagcctt atggaggcag gacggtgtca ttggcggatg tgtcctgctc	5489
cattgagatg gatggcaaac cccattttta agttatatatt ctttgatttt tgttaattta	5549
gagggttagg ttttgttttt tgttttttgt ttttttttaa gagaaacatt tataactgga	5609
tagcattgca gtgaaagcag cttgggatgt tggagctaata gccagctgtt tatactgctc	5669
tttcaagaca gcctcccttt attgaattgg cattagggaa taaacaagcc tttaaactgt	5729
ataaaagatc aaaaacctgg ttagacatgc cagcctttgc aaggcagggt agtcaccaa	5789
gactaacctc caagtggctt tatggacgct gcatatagag aaggcctaag tgtagcaacc	5849
atctgctcac agctgctatt aaccctataa tgactgaaat gaccctcca ctctattttt	5909
gtgttgtttt gcacagactc cggaaaagtg aaggctgcca atctgagtag tactcaa	5969
tgaggaaactg ctggtcttgg attttttttc cattaaattc agctgatcat attgatcagt	6029
agataaacgt aaatagcttc aaatttttaa agtggaattg cagtgttttt tcaactgtatc	6089
aaacaatgtc agtgctttat ttaataattc tcttctgtat catggcattt gtctacttgc	6149
ttattacatt gtcaattatg catttgtaata ttacatgta atatgcatta ttgcccagtt	6209
ttattatata ggctatggac ctcatgtgca tatagaaaga cagaaatcta gctctaccac	6269
aagttgcaca aatgttatct aagcattaag taattgtaga acataggact gctaattctca	6329
gttcgctctg tgatgtcaag tgcagaatgt acaattaact ggtgatttcc tcatactttt	6389
gatactactt gtacctgtat gtcttttaga aagacattgg tggagtctgt atcccttttg	6449
tatttttaata acaataattg tacatattgg ttatatatttt gttgaagatg gtagaaatgt	6509
actatgttta tgcttctaca tccagtttgt acaagctgga aaataaataa atataacat	6568

<210> 2

<211> 1537

<212> PRT

<213> Homo sapiens

<220>

<221> MISC\_FEATURE

<222> (1)..(1499)

<223> translation fragment 1

<220>

<221> MISC\_FEATURE

<222> (1500)..(1519)

<223> translation fragment 2

<220>

<221> MISC\_FEATURE

<222> (1520)..(1537)

<223> translation fragment 3

<400> 2

Met	Lys	Pro	Leu	Ala	Ile	Pro	Ala	Asn	His	Gly	Val	Met	Gly	Gln	Gln	
1				5				10						15		
Glu	Lys	His	Ser	Leu	Pro	Ala	Asp	Phe	Thr	Lys	Leu	His	Leu	Thr	Asp	
			20					25					30			
Ser	Leu	His	Pro	Gln	Val	Thr	His	Val	Ser	Ser	Ser	His	Ser	Gly	Cys	
		35					40					45				
Ser	Ile	Thr	Ser	Asp	Ser	Gly	Ser	Ser	Ser	Leu	Ser	Asp	Ile	Tyr	Gln	
	50					55					60					
Ala	Thr	Glu	Ser	Glu	Ala	Gly	Asp	Met	Asp	Leu	Ser	Gly	Leu	Pro	Glu	
65					70					75					80	
Thr	Ala	Val	Asp	Ser	Glu	Asp	Asp	Asp	Asp	Glu	Glu	Asp	Ile	Glu	Arg	
				85					90					95		
Ala	Ser	Asp	Pro	Leu	Met	Ser	Arg	Asp	Ile	Val	Arg	Asp	Cys	Leu	Glu	
			100					105					110			
Lys	Asp	Pro	Ile	Asp	Arg	Thr	Asp	Asp	Asp	Ile	Glu	Gln	Leu	Leu	Glu	
	115						120					125				
Phe	Met	His	Gln	Leu	Pro	Ala	Phe	Ala	Asn	Met	Thr	Met	Ser	Val	Arg	
	130					135					140					
Arg	Glu	Leu	Cys	Ala	Val	Met	Val	Phe	Ala	Val	Val	Glu	Arg	Ala	Gly	
145					150					155					160	
Thr	Ile	Val	Leu	Asn	Asp	Gly	Glu	Glu	Leu	Asp	Ser	Trp	Ser	Val	Ile	
			165						170					175		
Leu	Asn	Gly	Ser	Val	Glu	Val	Thr	Tyr	Pro	Asp	Gly	Lys	Ala	Glu	Ile	
			180					185					190			
Leu	Cys	Met	Gly	Asn	Ser	Phe	Gly	Val	Ser	Pro	Thr	Met	Asp	Lys	Glu	
		195					200					205				
Tyr	Met	Lys	Gly	Val	Met	Arg	Thr	Lys	Val	Asp	Asp	Cys	Gln	Phe	Val	
	210					215					220					
Cys	Ile	Ala	Gln	Gln	Asp	Tyr	Cys	Arg	Ile	Leu	Asn	Gln	Val	Glu	Lys	
225					230					235					240	

Asn Met Gln Lys Val Glu Glu Glu Gly Glu Ile Val Met Val Lys Glu  
 245 250 255  
 His Arg Glu Leu Asp Arg Thr Gly Thr Arg Lys Gly His Ile Val Ile  
 260 265 270  
 Lys Gly Thr Ser Glu Arg Leu Thr Met His Leu Val Glu Glu His Ser  
 275 280 285  
 Val Val Asp Pro Thr Phe Ile Glu Asp Phe Leu Leu Thr Tyr Arg Thr  
 290 295 300  
 Phe Leu Ser Ser Pro Met Glu Val Gly Lys Lys Leu Leu Glu Trp Phe  
 305 310 315 320  
 Asn Asp Pro Ser Leu Arg Asp Lys Val Thr Arg Val Val Leu Leu Trp  
 325 330 335  
 Val Asn Asn His Phe Asn Asp Phe Glu Gly Asp Pro Ala Met Thr Arg  
 340 345 350  
 Phe Leu Glu Glu Phe Glu Asn Asn Leu Glu Arg Glu Lys Met Gly Gly  
 355 360 365  
 His Leu Arg Leu Leu Asn Ile Ala Cys Ala Ala Lys Ala Lys Arg Arg  
 370 375 380  
 Leu Met Thr Leu Thr Lys Pro Ser Arg Glu Ala Pro Leu Pro Phe Ile  
 385 390 395 400  
 Leu Leu Gly Gly Ser Glu Lys Gly Phe Gly Ile Phe Val Asp Ser Val  
 405 410 415  
 Asp Ser Gly Ser Lys Ala Thr Glu Ala Gly Leu Lys Arg Gly Asp Gln  
 420 425 430  
 Ile Leu Glu Val Asn Gly Gln Asn Phe Glu Asn Ile Gln Leu Ser Lys  
 435 440 445  
 Ala Met Glu Ile Leu Arg Asn Asn Thr His Leu Ser Ile Thr Val Lys  
 450 455 460  
 Thr Asn Leu Phe Val Phe Lys Glu Leu Leu Thr Arg Leu Ser Glu Glu  
 465 470 475 480  
 Lys Arg Asn Gly Ala Pro His Leu Pro Lys Ile Gly Asp Ile Lys Lys  
 485 490 495  
 Ala Ser Arg Tyr Ser Ile Pro Asp Leu Ala Val Asp Val Glu Gln Val  
 500 505 510  
 Ile Gly Leu Glu Lys Val Asn Lys Lys Ser Lys Ala Asn Thr Val Gly  
 515 520 525  
 Gly Arg Asn Lys Leu Lys Lys Ile Leu Asp Lys Thr Arg Ile Ser Ile  
 530 535 540

Leu Pro Gln Lys Pro Tyr Asn Asp Ile Gly Ile Gly Gln Ser Gln Asp  
 545 550 555 560  
 Asp Ser Ile Val Gly Leu Arg Gln Thr Lys His Ile Pro Thr Ala Leu  
 565 570 575  
 Pro Val Ser Gly Thr Leu Ser Ser Ser Asn Pro Asp Leu Leu Gln Ser  
 580 585 590  
 His His Arg Ile Leu Asp Phe Ser Ala Thr Pro Asp Leu Pro Asp Gln  
 595 600 605  
 Val Leu Arg Val Phe Lys Ala Asp Gln Gln Ser Arg Tyr Ile Met Ile  
 610 615 620  
 Ser Lys Asp Thr Thr Ala Lys Glu Val Val Ile Gln Ala Ile Arg Glu  
 625 630 635 640  
 Phe Ala Val Thr Ala Thr Pro Asp Gln Tyr Ser Leu Cys Glu Val Ser  
 645 650 655  
 Val Thr Pro Glu Gly Val Ile Lys Gln Arg Arg Leu Pro Asp Gln Leu  
 660 665 670  
 Ser Lys Leu Ala Asp Arg Ile Gln Leu Ser Gly Arg Tyr Tyr Leu Lys  
 675 680 685  
 Asn Asn Met Glu Thr Glu Thr Leu Cys Ser Asp Glu Asp Ala Gln Glu  
 690 695 700  
 Leu Leu Arg Glu Ser Gln Ile Ser Leu Leu Gln Leu Ser Thr Val Glu  
 705 710 715 720  
 Val Ala Thr Gln Leu Ser Met Arg Asn Phe Glu Leu Phe Arg Asn Ile  
 725 730 735  
 Glu Pro Thr Glu Tyr Ile Asp Asp Leu Phe Lys Leu Arg Ser Lys Thr  
 740 745 750  
 Ser Cys Ala Asn Leu Lys Arg Phe Glu Glu Val Ile Asn Gln Glu Thr  
 755 760 765  
 Phe Trp Val Ala Ser Glu Ile Leu Arg Glu Thr Asn Gln Leu Lys Arg  
 770 775 780  
 Met Lys Ile Ile Lys His Phe Ile Lys Ile Ala Leu His Cys Arg Glu  
 785 790 795 800  
 Cys Lys Asn Phe Asn Ser Met Phe Ala Ile Ile Ser Gly Leu Asn Leu  
 805 810 815  
 Ala Pro Val Ala Arg Leu Arg Thr Thr Trp Glu Lys Leu Pro Asn Lys  
 820 825 830  
 Tyr Glu Lys Leu Phe Gln Asp Leu Gln Asp Leu Phe Asp Pro Ser Arg  
 835 840 845

Asn Met Ala Lys Tyr Arg Asn Val Leu Asn Ser Gln Asn Leu Gln Pro  
 850 855 860  
 Pro Ile Ile Pro Leu Phe Pro Val Ile Lys Lys Asp Leu Thr Phe Leu  
 865 870 875 880  
 His Glu Gly Asn Asp Ser Lys Val Asp Gly Leu Val Asn Phe Glu Lys  
 885 890 895  
 Leu Arg Met Ile Ala Lys Glu Ile Arg His Val Gly Arg Met Ala Ser  
 900 905 910  
 Val Asn Met Asp Pro Ala Leu Met Phe Arg Thr Arg Lys Lys Lys Trp  
 915 920 925  
 Arg Ser Leu Gly Ser Leu Ser Gln Gly Ser Thr Asn Ala Thr Val Leu  
 930 935 940  
 Asp Val Ala Gln Thr Gly Gly His Lys Lys Arg Val Arg Arg Ser Ser  
 945 950 955 960  
 Phe Leu Asn Ala Lys Lys Leu Tyr Glu Asp Ala Gln Met Ala Arg Lys  
 965 970 975  
 Val Lys Gln Tyr Leu Ser Asn Leu Glu Leu Glu Met Asp Glu Glu Ser  
 980 985 990  
 Leu Gln Thr Leu Ser Leu Gln Cys Glu Pro Ala Thr Asn Thr Leu Pro  
 995 1000 1005  
 Lys Asn Pro Gly Asp Lys Lys Pro Val Lys Ser Glu Thr Ser Pro Val  
 1010 1015 1020  
 Ala Pro Arg Ala Gly Ser Gln Gln Lys Ala Gln Ser Leu Pro Gln Pro  
 1025 1030 1035 1040  
 Gln Gln Gln Pro Pro Pro Ala His Lys Ile Asn Gln Gly Leu Gln Val  
 1045 1050 1055  
 Pro Ala Val Ser Leu Tyr Pro Ser Arg Lys Lys Val Pro Val Lys Asp  
 1060 1065 1070  
 Leu Pro Pro Phe Gly Ile Asn Ser Pro Gln Ala Leu Lys Lys Ile Leu  
 1075 1080 1085  
 Ser Leu Ser Glu Glu Gly Ser Leu Glu Arg His Lys Lys Gln Ala Glu  
 1090 1095 1100  
 Asp Thr Ile Ser Asn Ala Ser Ser Gln Leu Ser Ser Pro Pro Thr Ser  
 1105 1110 1115 1120  
 Pro Gln Ser Ser Pro Arg Lys Gly Tyr Thr Leu Ala Pro Ser Gly Thr  
 1125 1130 1135  
 Val Asp Asn Phe Ser Asp Ser Gly His Ser Glu Ile Ser Ser Arg Ser  
 1140 1145 1150

Ser Ile Val Ser Asn Ser Ser Phe Asp Ser Val Pro Val Ser Leu His  
 1155 1160 1165  
 Asp Glu Arg Arg Gln Arg His Ser Val Ser Ile Val Glu Thr Asn Leu  
 1170 1175 1180  
 Gly Met Gly Arg Met Glu Arg Arg Thr Met Ile Glu Pro Asp Gln Tyr  
 1185 1190 1195 1200  
 Ser Leu Gly Ser Tyr Ala Pro Met Ser Glu Gly Arg Gly Leu Tyr Ala  
 1205 1210 1215  
 Thr Ala Thr Val Ile Ser Ser Pro Ser Thr Glu Glu Leu Ser Gln Asp  
 1220 1225 1230  
 Gln Gly Asp Arg Ala Ser Leu Asp Ala Ala Asp Ser Gly Arg Gly Ser  
 1235 1240 1245  
 Trp Thr Ser Cys Ser Ser Gly Ser His Asp Asn Ile Gln Thr Ile Gln  
 1250 1255 1260  
 His Gln Arg Ser Trp Glu Thr Leu Pro Phe Gly His Thr His Phe Asp  
 1265 1270 1275 1280  
 Tyr Ser Gly Asp Pro Ala Gly Leu Trp Ala Ser Ser Ser His Met Asp  
 1285 1290 1295  
 Gln Ile Met Phe Ser Asp His Ser Thr Lys Tyr Asn Arg Gln Asn Gln  
 1300 1305 1310  
 Ser Arg Glu Ser Leu Glu Gln Ala Gln Ser Arg Ala Ser Trp Ala Ser  
 1315 1320 1325  
 Ser Thr Gly Tyr Trp Gly Glu Asp Ser Glu Gly Asp Thr Gly Thr Ile  
 1330 1335 1340  
 Lys Arg Arg Gly Gly Lys Asp Val Ser Ile Glu Ala Glu Ser Ser Ser  
 1345 1350 1355 1360  
 Leu Thr Ser Val Thr Thr Glu Glu Thr Lys Pro Val Pro Met Pro Ala  
 1365 1370 1375  
 His Ile Ala Val Ala Ser Ser Thr Thr Lys Gly Leu Ile Ala Arg Lys  
 1380 1385 1390  
 Glu Gly Arg Tyr Arg Glu Pro Pro Pro Thr Pro Pro Gly Tyr Ile Gly  
 1395 1400 1405  
 Ile Pro Ile Thr Asp Phe Pro Glu Gly His Ser His Pro Ala Arg Lys  
 1410 1415 1420  
 Pro Pro Asp Tyr Asn Val Ala Leu Gln Arg Ser Arg Met Val Ala Arg  
 1425 1430 1435 1440  
 Ser Ser Asp Thr Ala Gly Pro Ser Ser Val Gln Gln Pro His Gly His  
 1445 1450 1455

Pro Thr Ser Ser Arg Pro Val Asn Lys Pro Gln Trp His Lys Pro Asn  
 1460 1465 1470

Glu Ser Asp Pro Arg Leu Ala Pro Tyr Gln Ser Gln Gly Phe Ser Thr  
 1475 1480 1485

Glu Glu Asp Glu Asp Glu Gln Val Ser Ala Val Gly Thr Asp Phe Ser  
 1490 1495 1500

Gly Ser Arg Ala Ser His Leu Lys Gly Glu His Lys Lys Thr Ser Ala  
 1505 1510 1515 1520

Leu Glu Pro Trp Asn Ser His Ser Glu Asp Gly Gly Pro Val Cys Leu  
 1525 1530 1535

Leu

<210> 3  
 <211> 801  
 <212> DNA  
 <213> Mus musculus

<400> 3  
 actaaaggga acaaaagctg gagctccacc gcggtggcgg ccgctctaga actagtggat 60  
 cccccgggct gcaggaattc aagcgggtgg aaggatgtct ccgctgaggc agagagcagc 120  
 agcatggtgc ccgtgactac agaggaagcc aaacctgtcc ctatgcctgc ccacatagct 180  
 gtgacgccga gcactaccaa gggactcatc gcacggaagg aaggcaggta ccgggagccg 240  
 cctccacacac ctccaggcta cgtgggcatc cccattgccg atttcccaga agggccttgc 300  
 caccggcca ggaagcccc ggattacaac gtggccctgc agcgggtccc catggtggca 360  
 cggcccactg agggccccgc accgggccag acgcccctgc cagccgcagc cagccggccg 420  
 ggcagcaagc cacagtggca caagcccagc gacgcagacc cacgcctcgc gcccttccag 480  
 ccgcaggctt cgcaggagcg gaggaggacg aagatgaaca agtgtctgct gtttgaggcg 540  
 caggctcctt gatccacagt gagccaccca aaggagagca caagaagacg tccaagcct 600  
 tggagccttg gcacgcacat ctgaggatgg tggaccagtt tgccctcttc cctgccttaa 660  
 agcagcatgg ggcttcttct ccccttcttc ctttcccctt tgcattgtgaa atactgtgaa 720  
 gaaattgccc tggcactttg cagacttggt gcttgaaatg cacagcccag cagcccctga 780  
 gctgctgcct gccacgtcac g 801

<210> 4  
 <211> 281  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MISC\_FEATURE  
 <222> (1)..(202)  
 <223> fragment 1 of reading frame 1

<220>  
 <221> MISC\_FEATURE  
 <222> (203)..(225)  
 <223> fragment 2 of reading frame 1

<220>

```

<221> MISC_FEATURE
<222> (226)..(236)
<223> fragment 3 of reading frame 1

<220>
<221> MISC_FEATURE
<222> (237)..(267)
<223> fragment 4 of reading frame 1

<220>
<221> MISC_FEATURE
<222> (268)..(274)
<223> fragment 5 of reading frame 1

<220>
<221> MISC_FEATURE
<222> (275)..(281)
<223> fragment 6 of reading frame 1

<400> 4
Thr Lys Gly Asn Lys Ser Trp Ser Ser Thr Ala Val Ala Ala Ala Leu
1          5          10          15

Glu Leu Val Asp Pro Pro Gly Cys Arg Asn Ser Ser Gly Gly Lys Asp
          20          25          30

Val Ser Ala Glu Ala Glu Ser Ser Ser Met Val Pro Val Thr Thr Glu
          35          40          45

Glu Ala Lys Pro Val Pro Met Pro Ala His Ile Ala Val Thr Pro Ser
          50          55          60

Thr Thr Lys Gly Leu Ile Ala Arg Lys Glu Gly Arg Tyr Arg Glu Pro
65          70          75          80

Pro Pro Thr Pro Pro Gly Tyr Val Gly Ile Pro Ile Ala Asp Phe Pro
          85          90          95

Glu Gly Pro Cys His Pro Ala Arg Lys Pro Pro Asp Tyr Asn Val Ala
          100          105          110

Leu Gln Arg Ser Arg Met Val Ala Arg Pro Thr Glu Ala Pro Ala Pro
          115          120          125

Gly Gln Thr Pro Pro Ala Ala Ala Ala Ser Arg Pro Gly Ser Lys Pro
          130          135          140

Gln Trp His Lys Pro Ser Asp Ala Asp Pro Arg Leu Ala Pro Phe Gln

```

145		150		155		160									
Ala	Ala	Ser	His	Ser	Gly	Thr	Ser	Pro	Ala	Thr	Gln	Thr	His	Ala	Ser
				165					170					175	
Arg	Pro	Ser	Arg	Gln	Ala	Ser	Gln	Glu	Arg	Arg	Arg	Thr	Lys	Met	Asn
			180					185					190		
Lys	Cys	Leu	Leu	Phe	Glu	Ala	Gln	Ala	Pro	Ser	Thr	Val	Ser	His	Pro
		195						200				205			
Lys	Glu	Ser	Thr	Arg	Arg	Arg	Pro	Lys	Pro	Trp	Ser	Leu	Gly	Thr	His
	210					215					220				
Ile	Gly	Trp	Trp	Thr	Ser	Leu	Pro	Pro	Ser	Leu	Pro	Ser	Ser	Met	Gly
225					230				235						240
Leu	Leu	Leu	Pro	Phe	Phe	Leu	Ser	Pro	Leu	His	Val	Lys	Tyr	Cys	Glu
				245					250					255	
Glu	Ile	Ala	Leu	Ala	Leu	Cys	Arg	Leu	Val	Ala	Asn	Ala	Gln	Pro	Ser
		260						265					270		
Ser	Pro	Ala	Ala	Ala	Cys	His	Val	Thr							
		275				280									

<210> 5  
 <211> 237  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MISC\_FEATURE  
 <222> (1)..(15)  
 <223> fragment 1 of reading frame 2

<220>  
 <221> MISC\_FEATURE  
 <222> (16)..(16)  
 <223> fragment 2 of reading frame 2

<220>  
 <221> MISC\_FEATURE  
 <222> (17)..(42)  
 <223> fragment 3 of reading frame 2

<220>  
 <221> MISC\_FEATURE

```

<222> (43)..(55)
<223> fragment 4 of reading frame 2

<220>
<221> MISC_FEATURE
<222> (56)..(56)
<223> fragment 5 of reading frame 2

<220>
<221> MISC_FEATURE
<222> (57)..(145)
<223> fragment 6 of reading frame 2

<220>
<221> MISC_FEATURE
<222> (146)..(159)
<223> fragment 7 of reading frame 2

<220>
<221> MISC_FEATURE
<222> (160)..(207)
<223> fragment 8 of reading frame 2

<220>
<221> MISC_FEATURE
<222> (208)..(237)
<223> fragment 9 of reading frame 2

<400> 5
Leu Lys Gly Thr Lys Ala Gly Ala Pro Pro Arg Trp Arg Pro Leu Asn
1          5          10          15

Trp Ile Pro Arg Ala Ala Gly Ile Gln Ala Val Gly Arg Met Ser Pro
20          25          30

Leu Arg Gln Arg Ala Ala Ala Trp Cys Pro Leu Gln Arg Lys Pro Asn
35          40          45

Leu Ser Leu Cys Leu Pro Thr Leu Arg Arg Ala Leu Pro Arg Asp Ser
50          55          60

Ser His Gly Arg Lys Ala Gly Thr Gly Ser Arg Leu Pro His Leu Gln
65          70          75          80

Ala Thr Trp Ala Ser Pro Leu Pro Ile Ser Gln Lys Gly Leu Ala Thr
85          90          95

Arg Pro Gly Ser Pro Arg Ile Thr Thr Trp Pro Cys Ser Gly Pro Ala
100         105         110

```

Trp Trp His Gly Pro Leu Arg Pro Arg His Arg Ala Arg Arg Arg Leu  
 115 120 125

Gln Pro Gln Pro Ala Gly Arg Arg Leu Arg Arg Ser Gly Gly Gly Arg  
 130 135 140

Arg Thr Ser Val Cys Cys Leu Arg Arg Arg Leu Leu Asp Pro Gln Ala  
 145 150 155 160

Thr Gln Arg Arg Ala Gln Glu Asp Val Pro Ser Leu Gly Ala Leu Ala  
 165 170 175

Arg Thr Ser Glu Asp Gly Gly Pro Val Cys Leu Leu Pro Cys Leu Lys  
 180 185 190

Ala Ala Trp Gly Phe Phe Ser Pro Ser Ser Phe Pro Leu Cys Met Asn  
 195 200 205

Thr Val Lys Lys Leu Pro Trp His Phe Ala Asp Leu Leu Leu Glu Met  
 210 215 220

His Ser Pro Ala Ala Pro Glu Leu Leu Pro Ala Thr Ser  
 225 230 235

<210> 6  
 <211> 261  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MISC\_FEATURE  
 <222> (1)..(33)  
 <223> fragment 1 of reading frame 3

<220>  
 <221> MISC\_FEATURE  
 <222> (34)..(120)  
 <223> fragment 2 of reading frame 3

<220>  
 <221> MISC\_FEATURE  
 <222> (121)..(174)  
 <223> fragment 3 of reading frame 3

<220>  
 <221> MISC\_FEATURE  
 <222> (175)..(234)  
 <223> fragment 4 of reading frame 3

<220>

<221> MISC\_FEATURE

<222> (235)..(261)

<223> fragment 5 of reading frame 3

<400> 6

Arg Glu Gln Lys Leu Glu Leu His Arg Gly Gly Gly Arg Ser Arg Thr  
1 5 10 15

Ser Gly Ser Pro Gly Leu Gln Glu Phe Lys Arg Trp Glu Gly Cys Leu  
20 25 30

Arg Gly Arg Glu Gln Gln His Gly Ala Arg Asp Tyr Arg Gly Ser Gln  
35 40 45

Thr Cys Pro Tyr Ala Cys Pro His Ser Cys Asp Ala Glu His Tyr Gln  
50 55 60

Gly Thr His Arg Thr Glu Gly Arg Gln Val Pro Gly Ala Ala Ser His  
65 70 75 80

Thr Ser Arg Leu Arg Gly His Pro His Cys Arg Phe Pro Arg Arg Ala  
85 90 95

Leu Pro Pro Gly Gln Glu Ala Pro Gly Leu Gln Arg Gly Pro Ala Ala  
100 105 110

Val Pro His Gly Gly Thr Ala His Gly Pro Gly Thr Gly Pro Asp Ala  
115 120 125

Ala Cys Ser Arg Ser Gln Pro Ala Gly Gln Gln Ala Thr Val Ala Gln  
130 135 140

Ala Gln Arg Arg Arg Pro Thr Pro Arg Ala Leu Pro Gly Ala Gly Phe  
145 150 155 160

Ala Gly Ala Glu Glu Asp Glu Asp Glu Gln Val Ser Ala Val Gly Ala  
165 170 175

Gly Ser Leu Ile His Ser Glu Pro Pro Lys Gly Glu His Lys Lys Thr  
180 185 190

Ser Gln Ala Leu Glu Pro Trp His Ala His Leu Arg Met Val Asp Gln  
195 200 205

Phe Ala Ser Phe Pro Ala Leu Lys Gln His Gly Ala Ser Ser Pro Leu  
 210 215 220

Leu Pro Phe Pro Phe Ala Cys Glu Ile Leu Arg Asn Cys Pro Gly Thr  
 225 230 235 240

Leu Gln Thr Cys Cys Leu Lys Cys Thr Ala Gln Gln Pro Leu Ser Cys  
 245 250 255

Cys Leu Pro Arg His  
 260

<210> 7

<211> 307

<212> PRT

<213> *Drosophila melanogaster*

<400> 7

Ser Asn Val His Phe Leu His Leu Asn Ala Tyr Glu Leu Ala Ile Gln  
 1 5 10 15

Leu Thr Leu Gln Asp Phe Ala Asn Phe Arg Gln Ile Glu Ser Thr Glu  
 20 25 30

Tyr Val Asp Glu Leu Phe Glu Leu Arg Ser Arg Tyr Gly Val Pro Met  
 35 40 45

Leu Ser Lys Phe Ala Glu Leu Val Asn Arg Glu Met Phe Trp Val Val  
 50 55 60

Ser Glu Ile Cys Ala Glu His Asn Ile Val Arg Arg Met Lys Ile Val  
 65 70 75 80

Lys Gln Phe Ile Lys Ile Ala Arg His Cys Lys Glu Cys Arg Asn Phe  
 85 90 95

Asn Ser Met Phe Ala Ile Val Ser Gly Leu Gly His Gly Ala Val Ser  
 100 105 110

Arg Leu Arg Gln Thr Trp Glu Lys Leu Pro Ser Lys Tyr Gln Arg Leu  
 115 120 125

Phe Asn Asp Leu Gln Asp Leu Met Asp Pro Ser Arg Asn Met Ser Lys  
 130 135 140

Tyr Arg Gln Leu Val Ser Ala Glu Leu Leu Ala Gln His Pro Ile Ile  
 145 150 155 160

Pro Phe Tyr Pro Ile Val Lys Lys Asp Leu Thr Phe Ile His Leu Gly  
 165 170 175

Asn Asp Thr Arg Val Asp Gly Leu Val Asn Phe Glu Lys Leu Arg Met  
 180 185 190  
 Leu Ala Lys Glu Val Arg Leu Leu Thr His Met Cys Ser Ser Pro Tyr  
 195 200 205  
 Asp Leu Leu Ser Ile Leu Glu Leu Lys Gly Gln Ser Pro Ser Asn Ala  
 210 215 220  
 Leu Phe Ser Leu Asn Gln Met Ser Ala Ser Gln Ser Asn Ala Ala Ala  
 225 230 235 240  
 Gly Thr Val Ile Ala Ala Asn Ala Gly Gln Ala Thr Ile Lys Arg Arg  
 245 250 255  
 Lys Lys Ser Thr Ala Ala Pro Asn Pro Lys Lys Met Phe Glu Glu Ala  
 260 265 270  
 Gln Met Val Arg Arg Val Lys Ala Tyr Leu Asn Ser Leu Lys Ile Leu  
 275 280 285  
 Ser Asp Glu Asp Leu Leu His Lys Phe Ser Leu Glu Cys Glu Pro Ala  
 290 295 300  
 His Gly Ser  
 305

<210> 8

<211> 270

<212> PRT

<213> Homo sapiens

<400> 8

Ser Ala Glu Gly Leu Asp Leu Val Ser Ala Lys Asp Leu Ala Gly Gln  
 1 5 10 15

Leu Thr Asp His Asp Trp Ser Leu Phe Asn Ser Ile His Gln Val Glu  
 20 25 30

Leu Ile His Tyr Val Leu Gly Pro Gln His Leu Arg Asp Val Thr Thr  
 35 40 45

Ala Asn Leu Glu Arg Phe Met Arg Arg Phe Asn Glu Leu Gln Tyr Trp  
 50 55 60

Val Ala Thr Glu Leu Cys Leu Cys Pro Val Pro Gly Pro Arg Ala Gln  
 65 70 75 80

Leu Leu Arg Lys Phe Ile Lys Leu Ala Ala His Leu Lys Glu Gln Lys  
 85 90 95

Asn Leu Asn Ser Phe Phe Ala Val Met Phe Gly Leu Ser Asn Ser Ala  
 100 105 110

Ile Ser Arg Leu Ala His Thr Trp Glu Arg Leu Pro His Lys Val Arg

115					120					125					
Lys	Leu	Tyr	Ser	Ala	Leu	Glu	Arg	Leu	Leu	Asp	Pro	Ser	Trp	Asn	His
130						135					140				
Arg	Val	Tyr	Arg	Leu	Ala	Leu	Ala	Lys	Leu	Ser	Pro	Pro	Val	Ile	Pro
145					150					155					160
Phe	Met	Pro	Leu	Leu	Leu	Lys	Asp	Met	Thr	Phe	Ile	His	Glu	Gly	Asn
					165				170					175	
His	Thr	Leu	Val	Glu	Asn	Leu	Ile	Asn	Phe	Glu	Lys	Met	Arg	Met	Met
			180					185					190		
Ala	Arg	Ala	Ala	Arg	Met	Leu	His	His	Cys	Arg	Ser	His	Asn	Pro	Val
		195					200					205			
Pro	Leu	Ser	Pro	Leu	Arg	Ser	Arg	Val	Ser	His	Leu	His	Glu	Asp	Ser
	210					215					220				
Gln	Val	Ala	Arg	Ile	Ser	Thr	Cys	Ser	Glu	Gln	Ser	Leu	Ser	Thr	Arg
225					230					235					240
Ser	Pro	Ala	Ser	Thr	Trp	Ala	Tyr	Val	Gln	Gln	Leu	Lys	Val	Ile	Asp
				245					250					255	
Asn	Gln	Arg	Glu	Leu	Ser	Arg	Leu	Ser	Arg	Glu	Leu	Glu	Pro		
			260					265					270		

<210> 9

<211> 244

<212> PRT

<213> Mus musculus

<400> 9

Lys	Ala	Glu	Cys	Phe	Glu	Thr	Leu	Ser	Ala	Met	Glu	Leu	Ala	Glu	Gln
1				5					10					15	
Ile	Thr	Leu	Leu	Asp	His	Ile	Val	Phe	Arg	Ser	Ile	Pro	Tyr	Glu	Glu
			20					25					30		
Phe	Leu	Gly	Gln	Gly	Trp	Met	Lys	Leu	Asp	Lys	Asn	Glu	Arg	Thr	Pro
		35					40					45			
Tyr	Ile	Met	Lys	Thr	Ser	Gln	His	Phe	Asn	Glu	Met	Ser	Asn	Leu	Val
	50					55					60				
Ala	Ser	Gln	Ile	Met	Asn	Tyr	Ala	Asp	Ile	Ser	Ser	Arg	Pro	Asn	Ala
65					70					75					80
Ile	Glu	Lys	Trp	Val	Ala	Val	Ala	Asp	Ile	Cys	Arg	Cys	Leu	His	Asn
				85				90						95	
Tyr	Asn	Gly	Val	Leu	Glu	Ile	Thr	Ser	Ala	Leu	Asn	Arg	Ser	Pro	Ile
			100					105					110		

Tyr Arg Leu Lys Lys Thr Trp Ala Lys Val Ser Lys Gln Thr Lys Ala  
 115 120 125  
 Leu Met Asp Lys Leu Gln Lys Thr Val Ser Ser Glu Gly Arg Phe Lys  
 130 135 140  
 Asn Leu Arg Glu Thr Leu Lys Asn Cys Asn Pro Pro Ala Val Pro Tyr  
 145 150 155 160  
 Leu Gly Met Tyr Leu Thr Asp Leu Ala Phe Ile Glu Glu Gly Thr Pro  
 165 170 175  
 Asn Phe Thr Glu Glu Gly Leu Val Asn Phe Ser Lys Met Arg Met Ile  
 180 185 190  
 Ser His Ile Ile Arg Glu Ile Arg Gln Phe Gln Gln Thr Ala Tyr Arg  
 195 200 205  
 Ile Asp Gln Gln Pro Lys Val Ile Gln Tyr Leu Leu Asp Lys Ala Leu  
 210 215 220  
 Val Ile Asp Glu Asp Ser Leu Tyr Glu Leu Ser Leu Lys Ile Glu Pro  
 225 230 235 240  
 Arg Leu Pro Ala

<210> 10  
 <211> 249  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 10  
 Asp Glu Ile Thr Leu Leu Thr Leu His Pro Leu Glu Leu Ala Arg Gln  
 1 5 10 15  
 Leu Thr Leu Leu Glu Phe Glu Met Tyr Lys Asn Val Lys Pro Ser Glu  
 20 25 30  
 Leu Val Gly Ser Pro Trp Thr Lys Lys Asp Lys Glu Val Lys Ser Pro  
 35 40 45  
 Asn Leu Leu Lys Ile Met Lys His Thr Thr Asn Val Thr Arg Trp Ile  
 50 55 60  
 Glu Lys Ser Ile Thr Glu Ala Glu Asn Tyr Glu Glu Arg Leu Ala Ile  
 65 70 75 80  
 Met Gln Arg Ala Ile Glu Val Met Met Val Met Leu Glu Leu Asn Asn  
 85 90 95  
 Phe Asn Gly Ile Leu Ser Ile Val Ala Ala Met Gly Thr Ala Ser Val  
 100 105 110  
 Tyr Arg Leu Arg Trp Thr Phe Gln Gly Leu Pro Glu Arg Tyr Arg Lys  
 115 120 125

Phe Leu Glu Glu Cys Arg Glu Leu Ser Asp Asp His Leu Lys Lys Tyr  
 130 135 140  
 Gln Glu Arg Leu Arg Ser Ile Asn Pro Pro Cys Val Pro Phe Phe Gly  
 145 150 155 160  
 Arg Tyr Leu Thr Asn Ile Leu His Leu Glu Glu Gly Asn Pro Asp Leu  
 165 170 175  
 Leu Ala Asn Thr Glu Leu Ile Asn Phe Ser Lys Arg Arg Lys Val Ala  
 180 185 190  
 Glu Ile Ile Gly Glu Ile Gln Gln Tyr Gln Asn Gln Pro Tyr Cys Leu  
 195 200 205  
 Asn Glu Glu Ser Thr Ile Arg Gln Phe Phe Glu Gln Leu Asp Pro Phe  
 210 215 220  
 Asn Gly Leu Ser Asp Lys Gln Met Ser Asp Tyr Leu Tyr Asn Glu Ser  
 225 230 235 240  
 Leu Arg Ile Glu Pro Arg Gly Cys Lys  
 245

<210> 11  
 <211> 243  
 <212> PRT  
 <213> Homo sapiens

<400> 11  
 Val Ser Leu Leu Phe Asp His Leu Glu Pro Glu Glu Leu Ser Glu His  
 1 5 10 15  
 Leu Thr Tyr Leu Glu Phe Lys Ser Phe Arg Arg Ile Ser Phe Ser Asp  
 20 25 30  
 Tyr Gln Asn Tyr Leu Val Asn Ser Cys Val Lys Glu Asn Pro Thr Met  
 35 40 45  
 Glu Arg Ser Ile Ala Leu Cys Asn Gly Ile Ser Gln Trp Val Gln Leu  
 50 55 60  
 Met Val Leu Ser Arg Pro Thr Pro Gln Leu Arg Ala Glu Val Phe Ile  
 65 70 75 80  
 Lys Phe Ile Gln Val Ala Gln Lys Leu His Gln Leu Gln Asn Phe Asn  
 85 90 95  
 Thr Leu Met Ala Val Ile Gly Gly Leu Cys His Ser Ser Ile Ser Arg  
 100 105 110  
 Leu Lys Glu Thr Ser Ser His Val Pro His Glu Ile Asn Lys Val Leu  
 115 120 125  
 Gly Glu Met Thr Glu Leu Leu Ser Ser Ser Arg Asn Tyr Asp Asn Tyr

130	135	140
Arg Arg Ala Tyr Gly Glu Cys Thr Asp Phe Lys Ile Pro Ile Leu Gly		
145	150	155 160
Val His Leu Lys Asp Leu Ile Ser Leu Tyr Glu Ala Met Pro Asp Tyr		
	165	170 175
Leu Glu Asp Gly Lys Val Asn Val His Lys Leu Leu Ala Leu Tyr Asn		
	180	185 190
His Ile Ser Glu Leu Val Gln Leu Gln Glu Val Ala Pro Pro Leu Glu		
	195	200 205
Ala Asn Lys Asp Leu Val His Leu Leu Thr Leu Ser Leu Asp Leu Tyr		
	210	215 220
Tyr Thr Glu Asp Glu Ile Tyr Glu Leu Ser Tyr Ala Arg Glu Pro Arg		
225	230	235 240
Asn His Arg		

<210> 12  
 <211> 48  
 <212> PRT  
 <213> *Saccharomyces cerevisiae*

<400> 12
Ile Arg Gly Gly Thr Lys Glu Ala Leu Ile Glu His Leu Thr Ser His
1 5 10 15
Glu Leu Val Asp Ala Ala Phe Asn Val Thr Met Leu Ile Thr Phe Arg
20 25 30
Ser Ile Leu Thr Thr Arg Glu Phe Phe Tyr Ala Leu Ile Tyr Arg Tyr
35 40 45

<210> 13  
 <211> 47  
 <212> PRT  
 <213> *Mus musculus*

<400> 13
Ile Lys Gly Gly Thr Val Val Lys Leu Ile Glu Arg Leu Thr Tyr His
1 5 10 15
Met Tyr Ala Asp Pro Asn Phe Val Arg Thr Phe Leu Thr Tyr Arg Ser
20 25 30
Phe Cys Lys Gln Glu Leu Leu Asn Leu Leu Ile Glu Arg Phe Glu
35 40 45

<210> 14  
 <211> 48  
 <212> PRT  
 <213> Mus musculus

<400> 14  
 Ile Arg Tyr Ala Ser Val Glu Ala Leu Leu Glu Arg Leu Thr Asp Leu  
 1 5 10 15  
 Arg Phe Leu Ser Ile Asp Phe Leu Asn Thr Phe Leu His Thr Tyr Arg  
 20 25 30  
 Ile Phe Thr Thr Ala Thr Val Val Leu Ala Lys Leu Ser Asp Ile Tyr  
 35 40 45

<210> 15  
 <211> 49  
 <212> PRT  
 <213> Dictyostelium discoideum

<400> 15  
 Val Val Lys Phe Ala Ser Leu Asn Lys Leu Val Glu His Leu Thr His  
 1 5 10 15  
 Asp Ser Lys His Asp Leu Gln Phe Leu Lys Thr Phe Leu Met Thr Tyr  
 20 25 30  
 Gln Ser Phe Cys Thr Pro Glu Lys Leu Met Ser Lys Leu Gln Gln Arg  
 35 40 45  
 Tyr

<210> 16  
 <211> 77  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 16  
 Leu Thr Arg Ser Ser Arg Asp Glu Pro Leu Asn Phe Arg Ile Val Gly  
 1 5 10 15  
 Gly Tyr Glu Leu Arg Gly Val Ala Ile Ala Thr Gly Asn Ala Ala Val  
 20 25 30  
 Gly Ile Tyr Ile Ser His Val Glu Pro Gly Ser Lys Ala Gln Asp Val  
 35 40 45  
 Gly Leu Lys Arg Gly Asp Gln Ile His Glu Val Asn Gly Gln Ser Leu  
 50 55 60  
 Asp His Val Thr Ser Lys Arg Ala Leu Glu Ile Leu Thr  
 65 70 75

<210> 17  
 <211> 71  
 <212> PRT  
 <213> Homo sapiens

<400> 17  
 Asn Leu Lys Lys Asp Ala Lys Tyr Gly Leu Gly Phe Gln Ile Ile Gly  
   1                  5                  10                  15  
 Gly Glu Lys Met Gly Arg Leu Asp Leu Gly Ile Phe Ile Ser Ser Val  
                   20                  25                  30  
 Ala Pro Gly Gly Pro Ala Asp Leu Asp Gly Cys Leu Lys Pro Gly Asp  
                   35                  40                  45  
 Arg Leu Ile Ser Val Asn Ser Val Ser Leu Glu Gly Val Ser His His  
   50                  55                  60  
 Ala Ala Ile Glu Ile Leu Gln  
   65                  70

<210> 18  
 <211> 67  
 <212> PRT  
 <213> Homo sapiens

<400> 18  
 Ile Val Ile His Arg Gly Ser Thr Gly Leu Gly Phe Asn Ile Val Gly  
   1                  5                  10                  15  
 Gly Glu Asp Gly Glu Gly Ile Phe Ile Ser Phe Ile Leu Ala Gly Gly  
                   20                  25                  30  
 Pro Ala Asp Leu Ser Gly Glu Leu Arg Lys Gly Asp Gln Ile Leu Ser  
                   35                  40                  45  
 Val Asn Gly Val Asp Leu Arg Asn Ala Ser His Glu Gln Ala Ala Ile  
   50                  55                  60  
 Ala Leu Lys  
   65

<210> 19  
 <211> 68  
 <212> PRT  
 <213> Rattus norvegicus

<400> 19  
 Val Glu Leu Pro Lys Thr Glu Glu Gly Leu Gly Phe Asn Ile Met Gly  
   1                  5                  10                  15  
 Gly Lys Glu Gln Asn Ser Pro Ile Tyr Ile Ser Arg Ile Ile Pro Gly  
                   20                  25                  30  
 Gly Ile Ala Asp Arg His Gly Gly Leu Lys Arg Gly Asp Gln Leu Leu

35                      40                      45  
 Ser Val Asn Gly Val Ser Val Glu Gly Glu His His Glu Lys Ala Val  
 50                      55                      60

Glu Leu Leu Lys  
 65

<210> 20  
 <211> 65  
 <212> PRT  
 <213> Homo sapiens

<400> 20  
 Val Lys Val Gln Lys Gly Ser Glu Pro Leu Gly Ile Ser Ile Val Ser  
 1                      5                      10                      15

Gly Glu Lys Gly Gly Ile Tyr Val Ser Lys Val Thr Val Gly Ser Ile  
 20                      25                      30

Ala His Gln Ala Gly Leu Glu Tyr Gly Asp Gln Leu Leu Glu Phe Asn  
 35                      40                      45

Gly Ile Asn Leu Arg Ser Ala Thr Glu Gln Gln Ala Arg Leu Ile Ile  
 50                      55                      60

Gly  
 65

<210> 21  
 <211> 98  
 <212> PRT  
 <213> Drosophila melanogaster

<400> 21  
 Met Val Phe Ala Val Val Asp Lys Ala Gly Thr Val Val Met Ser Asp  
 1                      5                      10                      15

Gly Glu Glu Leu Asp Ser Trp Ser Val Leu Ile Asn Gly Ala Val Glu  
 20                      25                      30

Ile Glu His Ala Asn Gly Ser Arg Glu Glu Leu Gln Met Gly Asp Ser  
 35                      40                      45

Phe Gly Ile Leu Pro Thr Met Asp Lys Leu Tyr His Arg Gly Val Met  
 50                      55                      60

Arg Thr Lys Cys Asp Asp Cys Gln Phe Val Cys Ile Thr Gln Thr Asp  
 65                      70                      75                      80

Tyr Tyr Arg Ile Gln His Gln Gly Glu Glu Asn Thr Arg Arg His Glu  
 85                      90                      95

Asp Glu

<210> 22  
 <211> 99  
 <212> PRT  
 <213> Homo sapiens

<400> 22  
 Leu Leu Phe Glu Pro His Ser Lys Ala Gly Thr Val Leu Phe Ser Gln  
   1                  5                  10                  15  
 Gly Asp Lys Gly Thr Ser Trp Tyr Ile Ile Trp Lys Gly Ser Val Asn  
           20                  25                  30  
 Val Val Thr His Gly Lys Gly Leu Val Thr Thr Leu His Glu Gly Asp  
       35                  40                  45  
 Asp Phe Gly Gln Leu Ala Leu Val Asn Asp Ala Pro Arg Ala Ala Thr  
       50                  55                  60  
 Ile Ile Leu Arg Glu Asp Asn Cys His Phe Leu Arg Val Asp Lys Gln  
       65                  70                  75                  80  
 Asp Phe Asn Arg Ile Ile Lys Asp Val Glu Ala Lys Thr Met Arg Leu  
           85                  90                  95  
 Glu Glu His

<210> 23  
 <211> 97  
 <212> PRT  
 <213> Homo sapiens

<400> 23  
 Ala Met Phe Pro Val Thr His Ile Ala Gly Glu Thr Val Ile Gln Gln  
   1                  5                  10                  15  
 Gly Asn Glu Gly Asp Asn Phe Tyr Val Val Asp Gln Gly Glu Val Asp  
           20                  25                  30  
 Val Tyr Val Asn Gly Glu Trp Val Thr Asn Ile Ser Glu Gly Gly Ser  
       35                  40                  45  
 Phe Gly Glu Leu Ala Leu Ile Tyr Gly Thr Pro Arg Ala Ala Thr Val  
       50                  55                  60  
 Lys Ala Lys Thr Asp Leu Lys Leu Trp Gly Ile Asp Arg Asp Ser Tyr  
       65                  70                  75                  80  
 Arg Arg Ile Leu Met Gly Ser Thr Leu Arg Lys Arg Lys Met Tyr Glu  
           85                  90                  95  
 Glu

<210> 24  
 <211> 97  
 <212> PRT  
 <213> Homo sapiens

<400> 24  
 Cys Met Tyr Gly Arg Asn Tyr Gln Gln Gly Ser Tyr Ile Ile Lys Gln  
 1 5 10 15  
 Gly Glu Pro Gly Asn His Ile Phe Val Leu Ala Glu Gly Arg Leu Glu  
 20 25 30  
 Val Phe Gln Gly Glu Lys Leu Leu Ser Ser Ile Pro Met Trp Thr Thr  
 35 40 45  
 Phe Gly Glu Leu Ala Ile Leu Tyr Asn Cys Thr Arg Thr Ala Ser Val  
 50 55 60  
 Lys Ala Ile Thr Asn Val Lys Thr Trp Ala Leu Asp Arg Glu Val Phe  
 65 70 75 80  
 Gln Asn Ile Met Arg Arg Thr Ala Gln Ala Arg Asp Glu Gln Tyr Arg  
 85 90 95

Asn

<210> 25  
 <211> 103  
 <212> PRT  
 <213> Mus musculus

<400> 25  
 Arg Leu Arg Ser Val Val Tyr Leu Pro Asn Asp Tyr Val Cys Lys Lys  
 1 5 10 15  
 Gly Glu Ile Gly Arg Glu Met Tyr Ile Ile Gln Ala Gly Gln Val Gln  
 20 25 30  
 Val Leu Gly Gly Pro Asp Gly Lys Ser Val Leu Val Thr Leu Lys Ala  
 35 40 45  
 Gly Ser Val Phe Gly Glu Ile Ser Leu Leu Ala Val Gly Gly Gly Asn  
 50 55 60  
 Arg Arg Thr Ala Asn Val Val Ala His Gly Phe Thr Asn Leu Phe Ile  
 65 70 75 80  
 Leu Asp Lys Lys Asp Leu Asn Glu Ile Leu Val His Tyr Pro Glu Ser  
 85 90 95  
 Gln Lys Leu Leu Arg Lys Lys  
 100

<210> 26  
 <211> 91  
 <212> PRT  
 <213> *Caenorhabditis elegans*

<400> 26  
 Arg Glu Asp Phe Glu Ile Ile Arg Val Phe Asp Gly Asn Asn Ser Tyr  
 1 5 10 15  
 Arg Ser Gln Ile Ser Arg Asn Ile Val Val Ala Lys His Val Ser Val  
 20 25 30  
 Gln Gln Val Arg Asp Ala Ala Leu Arg Arg Phe His Ile Asn Asp Thr  
 35 40 45  
 Pro Glu Arg Tyr Tyr Ile Thr Gln Val Val Gly Glu Val Glu Glu Glu  
 50 55 60  
 Ile Leu Glu Asp Pro Val Pro Leu Arg Asn Val Lys Arg Pro Glu Gly  
 65 70 75 80  
 Lys Arg Ala Gln Ile Phe Ile Arg Tyr Tyr Asp  
 85 90

<210> 27  
 <211> 129  
 <212> PRT  
 <213> *Homo sapiens*

<400> 27  
 Ser Ile Leu Val Thr Ser Gln Asp Lys Ala Pro Ser Val Ile Ser Arg  
 1 5 10 15  
 Val Leu Lys Lys Asn Asn Arg Asp Ser Ala Val Ala Ser Glu Tyr Glu  
 20 25 30  
 Leu Val Gln Leu Leu Pro Gly Glu Arg Glu Leu Thr Ile Pro Ala Ser  
 35 40 45  
 Ala Asn Val Phe Tyr Ala Met Asp Gly Ala Ser His Asp Phe Leu Leu  
 50 55 60  
 Arg His Gly Glu Gly Pro Leu Leu Leu His Leu Ala Ser Pro Val Ala  
 65 70 75 80  
 Arg Leu Pro Gln Glu Leu Leu Arg Val Arg Glu Glu Gly Ala Pro Phe  
 85 90 95  
 Pro Gly Ser Arg Pro Gln Gly Gly Arg Leu His Gly His Cys Ser Glu  
 100 105 110  
 Glu Glu Ala Pro Leu Ala Tyr Arg Ser His Gly Val His Thr Arg Cys  
 115 120 125

Gly

<210> 28  
 <211> 149  
 <212> PRT  
 <213> Mus musculus

<400> 28  
 Gly Gly Lys Asp Val Ser Ala Glu Ala Glu Ser Ser Ser Met Val Pro  
 1 5 10 15

Val Thr Thr Glu Glu Ala Lys Pro Val Pro Met Pro Ala His Ile Ala  
 20 25 30

Val Thr Pro Ser Thr Thr Lys Gly Leu Ile Ala Arg Lys Glu Gly Arg  
 35 40 45

Tyr Arg Glu Pro Pro Pro Thr Pro Pro Gly Tyr Val Gly Ile Pro Ile  
 50 55 60

Ala Asp Phe Pro Glu Gly Pro Cys His Pro Ala Arg Lys Pro Pro Asp  
 65 70 75 80

Tyr Asn Val Ala Leu Gln Arg Ser Arg Met Val Ala Arg Pro Thr Glu  
 85 90 95

Ala Pro Ala Pro Gly Gln Thr Pro Pro Ala Ala Ala Ala Ser Arg Pro  
 100 105 110

Gly Ser Lys Pro Gln Trp His Lys Pro Ser Asp Ala Asp Pro Arg Leu  
 115 120 125

Ala Pro Phe Gln Ala Gly Phe Ala Gly Ala Glu Glu Asp Glu Asp Glu  
 130 135 140

Gln Val Ser Ala Val  
 145